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(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventor; and

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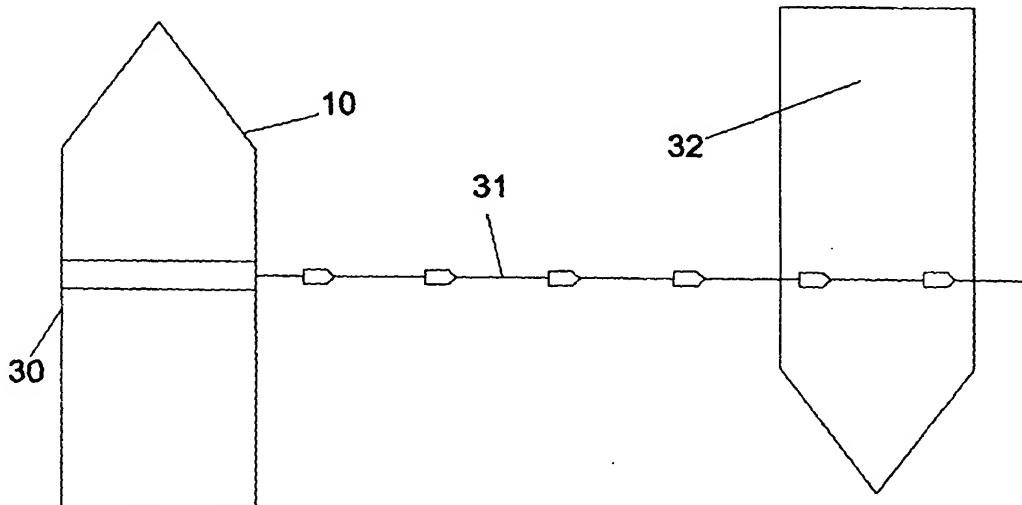
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- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: TARGET INTERCEPTION



(57) Abstract: A projectile deployment system for use in a intercepting target (32) wherein the system includes a body (10) defining a body axis, and a number of barrels (30) circumferentially spaced around the body axis. Each of the barrels (30) contains a number of projectiles (31) axially stacked therein, with a corresponding number of charges being provided such that each charge is associated with a respective projectile (31) along barrel (30). Each of the charges is individually activated to deploy a respective projectile (31) in response to a signal from a controller.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2003/001034

A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl. 7: F42B 12/60; F41H 11/02; F41F 1/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
AU: IPC F41F 1/00; F41G 7/00, 7/20; F41H 11/02; F41B 12/32, 12/36, 12/60

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

DWPI: Q79/DC with keywords such as intercept, missile, projectile, pattern and similar terms.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	WO 03/006915 A (METAL STORM LIMITED) 23 January 2003 Whole document	1-28, 32-49
X	WO 01/53770 A (METAL STORM LIMITED) 26 July 2001 Whole document	1-28, 32-49
X	EP 821215 A (TRW INC.) 28 January 1998 Whole document	34, 35, 40-47

 Further documents are listed in the continuation of Box C See patent family annex

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

12 January 2004

Date of mailing of the international search report

16 JAN 2004

Name and mailing address of the ISA/AU

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2003/001034

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5535679 A (CRADDOCK) 16 July 1996 Whole document	34, 35, 40-47
X	WO 97/16696 A (HOLLANDSE SIGNAALAPPARATEN B.V.) 9 May 1997 Whole document	34, 35, 40-47
X	GB 1430750 A (BOLKOW GmbH) 7 April 1976 Whole document	34, 35, 40-47

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU2003/001034

Box I Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos :
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos :
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos :
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a)

Box II Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. Claims 1-33, 36-39, 48, 49 directed to various projectile deployment systems, methods of manufacturing projectile deployment systems and methods of intercepting targets wherein each of the systems and methods are characterised by including a body having a number of barrels with each barrel including an array of axially stacked projectiles and associated propellant charges; and
2. Claims 34, 35, 40-47 directed to various methods and apparatus for intercepting a target wherein each of the methods and apparatus are characterised by including a body with a number of projectile systems wherein each projectile system deploys a number of projectiles in a predetermined direction. There is no restriction that each of the projectile systems comprises a barrel including an axial array of projectiles and associated charges.

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/AU2003/001034

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member				
WO	03/006915	AU	2002325618			
WO	01/53770	AU	200140322	BR	0107852	CA 2396074
		EP	1250561	US	2003172832	
EP	821215	CA	2251076	JP	11-264699	
US	5535679	EP	718590			
WO	97/16696	AU	72953/96	CA	2235407	EP 856142
		NO	981709			
GB	1430750	FR	1605447			

END OF ANNEX